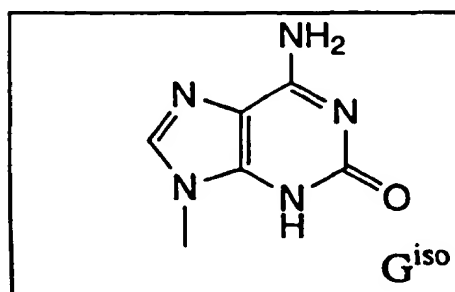
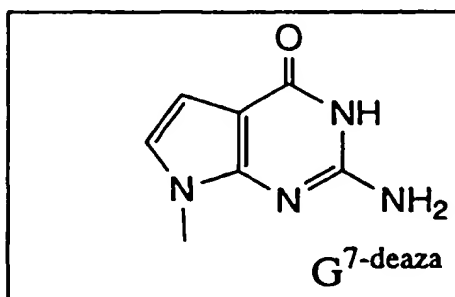
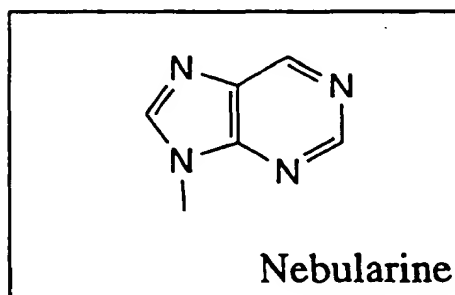
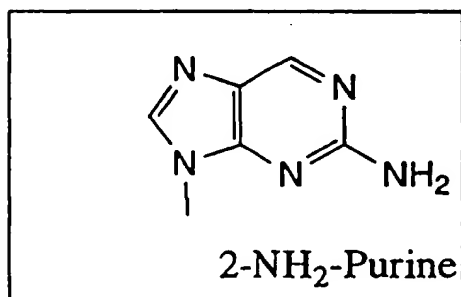
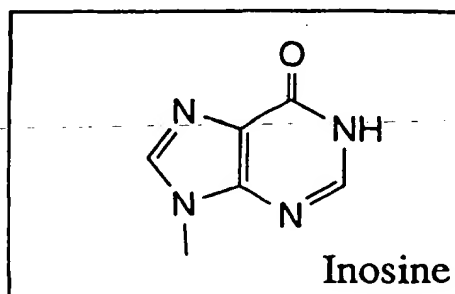


**Guanosine Modifications used in the study****FIG. 1A**



5'-NNNNNX1X2CGX3X4NNNNN-3'.

Abasic (1', 2'-deoxyribose)

Oligo 91-3 :  $X_1 = R, X_2 = A, X_3 = T, X_4 = T$

Oligo 91-4:  $X_2 = R, X_1 = G, X_3 = T, X_4 = T$

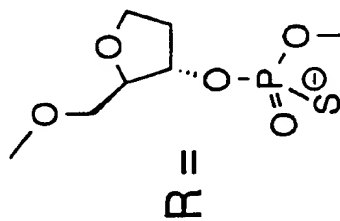


FIG. 1B-1



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5'-NNNNNX1X2CGX3X4NNNNN-3'.

Abasic (1,3-propanediol)

Oligo 109-4 :  $X_1 = R$ ,  $X_2 = A$ ,  $X_3 = T$ ,  $X_4 = T$

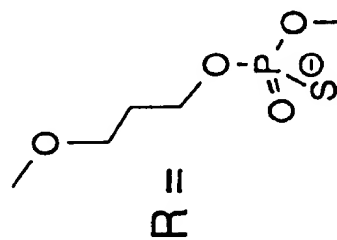


FIG. 1B-2



5'-NNNNNX1X2CGX3X4NNNNN-3'.

3-Nitropyrrole

Oligo 105-4 :  $X_1 = R$ ,  $X_2 = A$ ,  $X_3 = T$ ,  $X_4 = T$

Oligo 105-3:  $X_2 = R$ ,  $X_1 = G$ ,  $X_3 = T$ ,  $X_4 = T$

R =

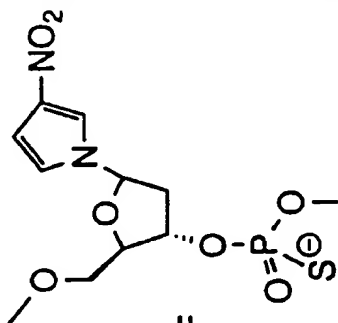


FIG. 1B-3



5'-NNNNNX1X2CGX3X4NNNNN-3'.

5-Nitroindole

Oligo 107-4:  $X_1 = R$ ,  $X_2 = A$ ,  $X_3 = T$ ,  $X_4 = T$

Oligo 107-7:  $X_4 = R$ ,  $X_1 = G$ ,  $X_2 = A$ ,  $X_3 = T$

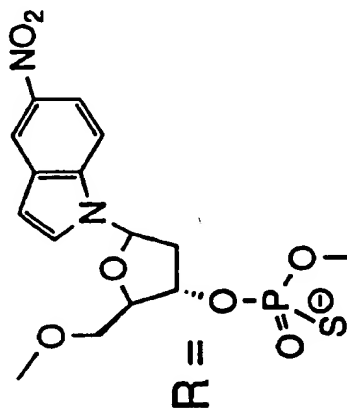


FIG. 1B-4



**1',2'-Dideoxyribose Substitution**

| <b>HYB No.</b> | <b>Sequences and Modification (5'-3')</b> | <b>Batch No.</b> |
|----------------|---|------------------|
| HYB1158        | CTATCTGACGTTCTCTGT                        | D7-131-1         |
| HYB1160        | CTAXXTGACGTTCTCTGT                        | D7-131-12        |
| HYB1161        | CTATCTGAXGTTCTCTGT                        | D7-131-13        |

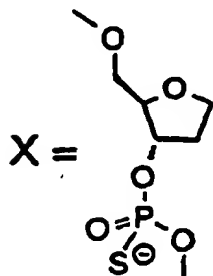


FIG. 2A

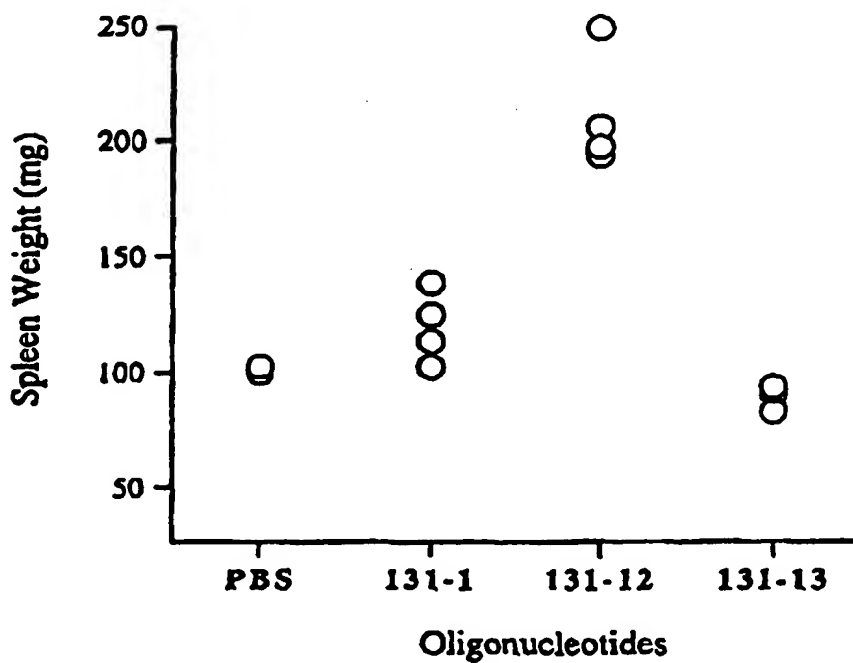
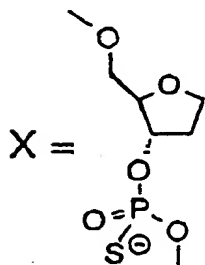
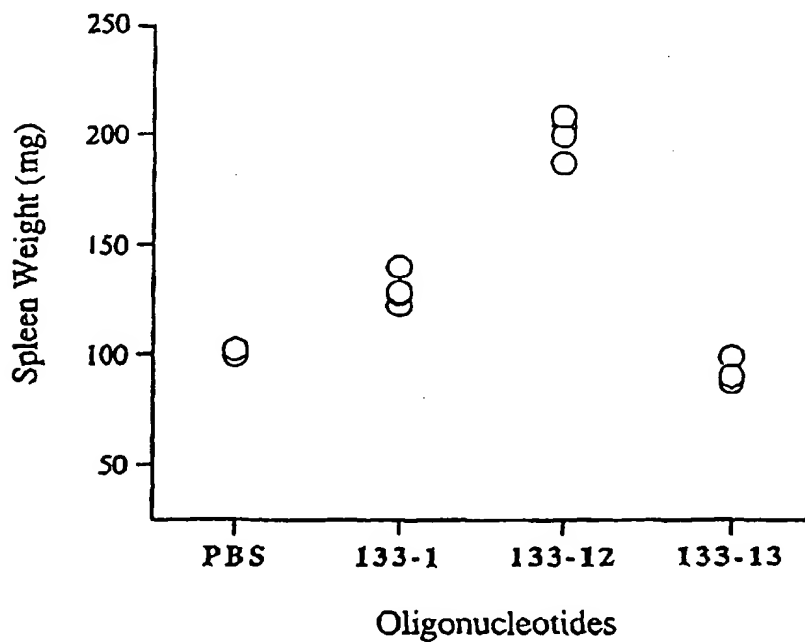


FIG. 2B



**1',2'-Dideoxyribose Substitution**

| <b>HYB No.</b> | <b>Sequences and Modification (5'-3')</b> | <b>Batch No.</b> |
|----------------|---|------------------|
| HYB1159        | CCTACTAG <u>C</u> GTTCTCATC               | D7-133-1         |
| HYB1162        | CCT <u>X</u> XTAGCGTTCTCATC               | D7-133-12        |
| HYB1163        | CCTACTAGXGTTCTCATC                        | D7-133-13        |

**FIG. 3A****FIG. 3B**